

What is claimed is:

- Sub A2
- 5 1. A massively parallel processing system comprising:
a plurality of processing element nodes;
a scalable interconnection network comprising:
a plurality of physical communication links; and
a plurality of first level routers for interconnecting the plurality of
processing element nodes in a cluster; and
one or more metarouters for interconnecting the plurality of first level
10 routers so that each one of the routers in a first cluster is connected to all other
clusters through one or more metarouters.
- 15 2. The massively parallel processing system of claim 1 wherein each one of the
clusters is a two-dimensional hypercube.
3. The massively parallel processing system of claim 1 wherein each one of the
metarouters are eight port routers.
- 20 4. The massively parallel processing system of claim 1 wherein each one of the
metarouters are four port routers.
5. The massively parallel processing system of claim 1 wherein each one of the
processing element nodes comprises four processors.
- 25 6. A massively parallel processing system comprising:
a plurality of processors;
a first set of routers for interconnecting the plurality of processors as two-
dimensional hypercubes; and
- Sub A3